

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
2 June 2005 (02.06.2005)

PCT

(10) International Publication Number
WO 2005/050612 A2

(51) International Patent Classification⁷: **G09G 3/36**

(21) International Application Number:
PCT/IB2004/052368

(22) International Filing Date:
10 November 2004 (10.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03104275.7 19 November 2003 (19.11.2003) EP

(71) Applicant (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS N. V.** [NL/NL];
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **WELBERS, Antonius, Petrus, Gerardus** [NL/DE]; c/o Philips Intellectual Property & Standards GmbH, Weissshausstr. 2, 52066 Aachen (DE). **TOBESCU, Corneliu** [CH/DE]; c/o Philips Intellectual Property & Standards GmbH, Weissshausstr.

2, 52066 Aachen (DE). **MAONE, Francesco** [IT/DE]; c/o Philips Intellectual Property & Standards GmbH, Weissshausstr. 2, 52066 Aachen (DE).

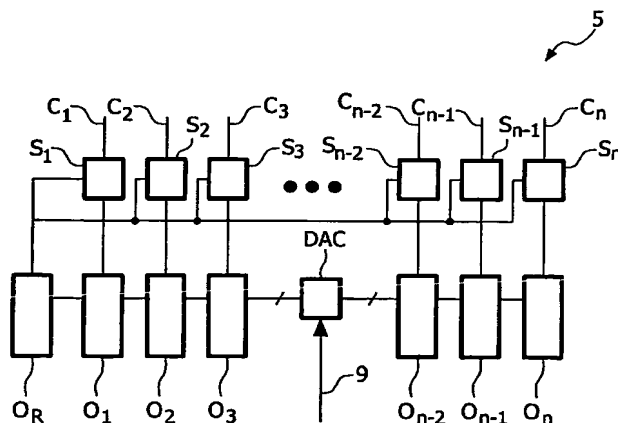
(74) Agents: **VOLMER, Georg** et al.; Philips Intellectual Property & Standards GmbH, Weissshausstr. 2, 52066 Aachen (DE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE,

[Continued on next page]

(54) Title: CIRCUIT ARRANGEMENT FOR DRIVING A DISPLAY ARRANGEMENT



(57) Abstract: The invention concerns a circuit arrangement (2) for driving a display arrangement (1). Further it concerns a display arrangement (1) and a method for driving a display arrangement (1). To provide an arrangement (2) having a good offset cancellation combined with high quality illustrating of an image the circuit arrangement includes column driving means (5) for driving n column electrodes (C) and row driving means (4) for driving m row electrodes (R) of the display arrangement (1), wherein the column driving means (5) comprises n output channels (O), each output channel (O) having a column electrode (C) assigned and is arranged for providing a respective column voltage to the assigned column electrode (C), an additional output channel (OR) is arranged for providing a respective column voltage, whereas each of the n column electrodes (C) is connectable to the additional output channel (OR). The additional output channel (OR) will be calibrated at first. Then the additional output channel will successively replace the output channel (O₁ - O_n), whereas during replacement the output channels (O₁ - O_n) will be calibrated sequentially. So the time required for offset cancellation will not reduce the time for settling the column voltage.



SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

- *without international search report and to be republished upon receipt of that report*